

REMARKS

Status of the Claims

Claims 3-8, 17, 32-33, and 35-39 are pending in the application.

Claim 3 is amended herein. Support for the claim is found in the specification as originally filed.

Claim 39 is canceled herein without prejudice as allegedly being drawn to non-elected subject matter. Applicants reserve the right to reintroduce cancelled subject matter, for example, in later-filed continuing application(s).

No new matter is introduced by the present amendment.

Office Comment to Claim 39 Relating to Election/Restrictions

Regarding Claim 39, which was newly submitted in Applicants' previous Amendment and Reply, the instant Office Action states, "claim 39 is withdrawn from consideration as being directed to a non-elected invention." Office Action at page 2.

In order to advance prosecution, by the present amendment, Claim 39 is canceled without prejudice.

Rejections under 35 U.S.C. § 112-2nd are Traversed or Rendered Moot

The Office rejected Claims 3-8, 17, 31-33, and 35-38 as allegedly indefinite. Based on the foregoing amendment and the following remarks, Applicants respectfully assert that any alleged basis for this rejection is now moot or properly traversed.

According to the Office, "Claim 3 is vague and indefinite due to the phrase 'a sequence having 95% homology thereto, wherein the polypeptide is an *Arthrobacter* hsp70 protein'. There is no functional requirement for the homologous sequence." Office Action at page 3, lines 4-6. Moreover, the Office states, "written support could not be found for nucleotides 291-2956 of SEQ ID NO:1." Office Action at page 3, lines 13-14.

By the present amendment, the phrase "291-2956" in Claim 3 is replaced by the recitation "291-2153," which encodes the amino acid sequence shown in SEQ ID NO:2. Moreover, Claim

3 is amended to cancel the recitation "(d) a nucleotide sequence encoding a polypeptide having at least 95% amino acid sequence identity to the amino acid sequence of SEQ ID NO:2, wherein the polypeptide is an *Arthrobacter* hsp70 protein, or the fully complementary sequence thereof."

Accordingly, any asserted basis for the rejection is now traversed or rendered moot. Applicants respectfully request that the rejection be withdrawn.

Rejections under 35 U.S.C. § 112-1st are Traversed or Rendered Moot

Asserted Lack of Enablement

The Office rejected Claims 3-8, 17, 31-33, and 35-38 as allegedly lacking enablement. Based on the foregoing amendment and the following remarks, Applicants respectfully assert that any alleged basis for this rejection is now moot or properly traversed.

More specifically, the Office states,

the specification, while being enabling for "an isolated polynucleotide comprising the nucleic acid sequence set forth in SEQ ID NO: 1, 'an isolated polynucleotide which the amino acid sequence set forth in SEQ ID NO: 2 or SEQ ID NO: 2 amino acids 162 to 365, does ***not*** reasonably provide enablement for 'an isolated nucleic acid sequence encoding [any] *Arthrobacter* hsp70 protein which is 95% homologous to SEQ ID NO:2.

Office Action at page 4, lines 1-7; emphasis in original.

Although Applicants disagree with the Office assertion regarding lack of enablement, in order to advance prosecution, Applicants have amended Claim 3 to delete the recitation in "(d)."

Accordingly, the asserted basis for the rejection is now rendered moot, and Applicants respectfully request that the rejection be withdrawn.

Moreover, regarding the rejection under 35 U.S.C. §112 as it relates to the claims directed to a method for preventing a disease in fish, the Office maintains that "[Applicants'] results indicate that the VP2 sequence achieved protection against virulent IPNV, but are silent as to whether VP3 sequence has the same ability." Office Action at page 7, lines 4-6. The Office states, "[t]he specification does not provide any other working examples for prevention or protection against any other disease in fish ..." Office Action at page 7, lines 8-11. According to the Office, "Applicants should provide additional evidence, such as challenge experiments, to demonstrate these [DNA] structures' ability as vaccines." Office Action at page 8, last sentence.

Applicants submit herewith additional evidence by way of the Declaration of Nathalie Simard under 37 C.F.R. §1.132 in support of their traversal of the rejections based on alleged lack of enablement. In this regard, as shown in Exhibit II of the Declaration, Trial 1 and Trial 2 demonstrate the improved level of survival in fish fry vaccinated with hsp70 adjuvanted vaccines compared to all those which have used the antigen alone. Applicants have demonstrated a surprising technical effect of improving the relative percent survival in fish which are vaccinated with hsp70 adjuvanted vaccines. The instant specification at page 9, last paragraph, teaches that “*Arthrobacter* hsp70 protein is not only effective in adjuvanting vaccines comprising other antigens, but it also has immunogenic activity in its own right. *Arthrobacter* hsp70 can provide the active principle for a vaccine to prevent or treat a variety of human and veterinary diseases, including diseases caused by fish pathogens ...”

Accordingly, any asserted basis for the rejection is now traversed or rendered moot, and Applicants respectfully request that the rejection be withdrawn.

Asserted Lack of Written Description

The Office rejected Claims 3-8, 17, 31-33, and 35-38 as allegedly failing to comply with the written description requirement. Based on the foregoing amendment, Applicants respectfully assert that any alleged basis for this rejection is now moot.

According to the Examiner, only “an isolated polynucleotide comprising the nucleic acid sequence set forth in SEQ ID NO: 1, 'an isolated polynucleotide which encodes the amino acid sequence set forth in SEQ ID NO: 2 or SEQ ID NO: 2 amino acids 162 to 365', but not the full breadth of the claims meets the written description provisions of 35 USC 112, first paragraph.” Office Action at page 14, lines 7-11. According to the Examiner, ‘as stated above, Claim 3 is vague and indefinite due to the phrase “a sequence having 95% homology thereto, wherein the polypeptide is an *Arthrobacter* hsp70 protein”.’ Office Action at page 14, lines 14-16.

Although Applicants disagree with the Office assertion regarding failure to comply with the written description requirement, by the present amendment, the asserted basis for the rejection is now rendered moot, and Applicants respectfully request that the rejection be withdrawn.

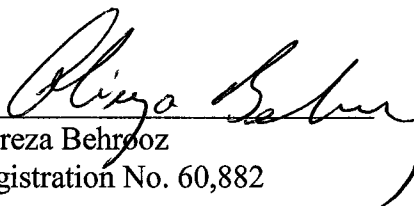
CONCLUSION

All alleged bases for rejection of Applicants' pending claims have been properly traversed or rendered moot. Accordingly, the present application is in condition for immediate allowance, and early notice to that effect is earnestly solicited.

The Examiner is invited to contact Applicants' undersigned representative using the information provided below if he has any questions or comments regarding this Reply. If any further action other than allowance of all claims is contemplated, Applicants respectfully request that the Examiner contact Applicants' undersigned representative to arrange for a formal interview.

Respectfully submitted,

Date: July 30, 2008


Alireza Behrooz
Registration No. 60,882

WOMBLE CARLYLE SANDRIDGE & RICE
P. O. Box 7037
Atlanta, Georgia 30357-0037
Telephone: (404) 888-7363
Facsimile: (404) 870-4832